



Rec'd PCT/PTO 31 JAN 2005

PCT #2

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of

KURODA et al

Atty. Ref.: 1035-560

Serial No. 10/519,559

TC/A.U.: unassigned

Filed: December 28, 2004

Examiner: unassigned

For: HOLLOW NANOPARTICLES HAVING MODIFIED CYSTEINE  
RESIDUE, AND DRUG USING THE HOLLOW NANOPARTICLES

\* \* \* \* \*

January 31, 2005

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**INFORMATION DISCLOSURE STATEMENT**

As suggested by 37 C.F.R. 1.97, the undersigned attorney brings to the attention of the Patent and Trademark Office the references listed on the attached form PTO-1449.

- ☐ All listed documents are attached.
- ☐ Copies of U.S. Patent Publications are not required and are not attached.
- ☒ Listed publication No. 10 is enclosed.
- ☒ The listed documents Nos. 1-9 were cited in the IPER and copies should have

been supplied by WIPO directly to the US PTO. If copies are not timely received from WIPO, please telephone the undersigned so that copies can be timely supplied for the Examiner's consideration in this US National Phase Application.

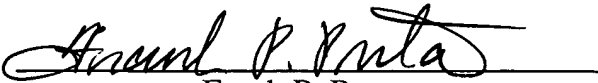
This is not to be construed as a representation that a search has been made or that no better prior art exists, or that a reference is relevant merely because cited.

The Examiner is requested to initial the attached form PTO-1449 and to return a copy of the initialed document to the undersigned as an indication that the attached references have been considered and made of record.

KURODA et al  
Serial No. 10/519,559

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By:   
Frank P. Presta  
Reg. No. 19,828

FPP:cr  
1100 North Glebe Road, 8th Floor  
Arlington, VA 22201-4714  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100

**INFORMATION DISCLOSURE**  
**CITATION**

ATTY. DOCKET NO. •

SERIAL NO.

1035-560

19.559

APPLICANT

KURODA et al

(Use several sheets if necessary)

FILING DATE

TC/A.U.

December 28, 2004

unassigned



## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

POWERFUL PEOPLE DOCUMENTS							TRANSLATION	
DOCUMENT			DATE	COUNTRY	CLASS	SUBCLASS	YES	NO

**OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)**

1.	EP 919568 A1 (SORIN DIAGNOSIS S R L) June 2, 1999, entire text; claim 29 & US 6172193 A & JP 11-253184A
2.	MANGOLD, C.M. et al. "Analysis of intermolecular disulfide bonds and free sulfhydryl groups in hepatitis B surface antigen particles." Arch. Virol., 1997, Vol. 142, No. 11, p. 2257-2267, entire text; Figs. 3 and 4
3.	PRANGE, R. et al. "Mutational analysis of HBsAg assembly." Intervirology, 1995, Vol. 38, Nos. 1-2, p. 16-23, entire text; Table 1
4.	MANGOLD, C.M. et al., "Secretion and antigenicity of hepatitis B virus small envelop proteins lacking cysteines in the major antigenic region." Virology, 1995, Vol. 211, No. 2, p. 535-543, entire text; Figs. 1-5; Tables 1 and 2
5.	BRUCE S.A. et al., "Mutations of some critical amino acid residues in the hepatitis B virus surface antigen." J. Med. Virol., 1995, Vol. 46, No. 2, p. 157-161, entire text; Fig. 1
6.	ANTONI, B.A. et al. Site-directed mutagenesis of cysteine residues of hepatitis B surface antigen. Analysis of two single mutants and the double mutant." Eur. J. Biochem., 1994, Vol. 222, No. 1, p. 121-127, entire text; Figs. 1-4
7.	MANGOLD, C.M. et al. "Mutational analysis of the cysteine residues in the hepatitis B virus small envelope protein." J. Virol., 1993, vol. 67, No. 8, p. 4588-4597, entire text; Fig. 3
8.	ASHTON-RICKARDT, P.G. et al. "Mutants of the hepatitis B virus surface antigen that define some antigenically essential residues in the immunodominant a region." J. Med. Virol., 1989, Vol. 29, No. 3, p. 196-203, entire text; Fig. 1
9.	WO 01/64930 A1 (JAPAN SCIENCE AND TECHNOLOGY CORP) September 7, 2001 & EP 1262555 A1 & JP 2001-316298 A
10.	"Hepatitis B Virus Envelope L Protein Particles" Shun'ichi KURODA et al. The Journal of Biological Chemistry, vol. 267, No. 3, Issue of January 25, pp. 1953-1961, 1992, © 1992 by The American Society for Biochemistry and Molecular Biology, Inc.

\*Examiner

Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.